

What is claimed is:

1. A display device comprising:

an electron source;

a phosphor layer which emits light when the phosphor layer is excited by electron beams from the electron source; and

a panel on which the phosphor layer is formed, wherein phosphor which constitutes the phosphor layer is formed by adding at least one of ytterbium ion ( $\text{Yb}^{3+}$ ) or samarium ion ( $\text{Sm}^{3+}$ ) to a terbium ion ( $\text{Tb}^{3+}$ ) activated phosphor which contains zinc (Zn), yttrium (Y), silicon (Si) and oxygen (O) as base materials.

2. A display device according to claim 1, wherein the addition concentration of the ytterbium ion ( $\text{Yb}^{3+}$ ) is  $10\mu\text{g}$  or more and  $1000\mu\text{g}$  or less per  $1\text{g}$  of the phosphor.

3. A display device according to claim 1, wherein the addition concentration of the samarium ion ( $\text{Sm}^{3+}$ ) is  $30\mu\text{g}$  or more and  $300\mu\text{g}$  or less per  $1\text{g}$  of the phosphor.